THE ASSIST

June 29, 2006 | Issue No. 18

**** *Serving the RAST Fleet* ****

ABOUT *THE ASSIST*

The ASSIST is an informational newsletter for the maintainer, pilot, or anyone else who interfaces with the RAST system on a daily basis.

A few years ago, one of the RAST Techs told us that he never gets to read the ASSIST, because it usually ends up as bathroom reading in Officer Country. We're flattered, but it would be best if this was distributed so that everyone involved with RAST gets a chance to read it.

This newsletter is meant as an informal vehicle to exchange RAST-related info. We encourage anyone to contact us with any questions or comments they may have, via e-mail or phone.

If you see that there's a problem with the way RAST is operating, but you're thinking, "That's just the way it is", then please let us know. Our job here at NAVAIR Lakehurst is to fix problems, through design mods, procedural changes, and technical support. We can't fix a problem if we don't know about it. One of the main goals of the RAST In-Service Team (made up of engineers, logisticians, and ASIR field personnel) is to provide as much assistance as possible directly to the end user. Our ASIR reps. have developed a wealth of knowledge by resolving numerous RAST issues on-site for many years. They have seen and fixed it all, so please make use of their knowledge and follow their advice….it helps everyone in the long run. Please, fill out the feedback forms, send an e-mail, or give us a call. All the POC's are inside on page 2. We're looking forward to hearing from you.

Internet Access !!

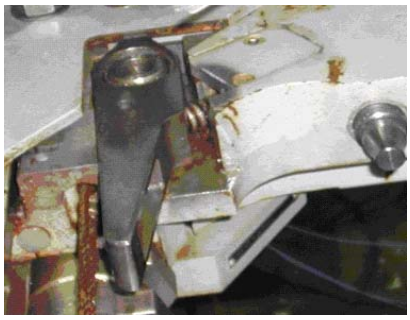
Electronic issues no. 1 through 17 are available simply by logging on to: **www.lakehurst.navy.mil/nlweb/rast** This is recommended reading for all RAST techs. The maintenance tips and general information in the back issues can be just as helpful today as they were when they were written.

Inside this issue...

RSD LATCH AND PIVOT DESIGN CHANGE

After an extensive development and test program, the new RSD arresting beam latch and pivot design change was implemented by Launch and Recovery Change (LRC) 66. If your RSD is a 6532E900-18, then you have the new latches and pivots.

OLD LATCH DESIGN (-17 & below)



NEW LATCH DESIGN (-18 & subsequent)

During 20 years of operational experience with the RAST System, NAVAIR has had occasional reports of RSD arresting beams becoming unlatched during straightening and traversing maneuvers. These reports were rare in the early 1990's, but rose gradually until reaching a peak in 1998 with three ships reporting incidents that year.

When investigated, all these failures were linked to issues of extensive wear and tear during usage, overhaul and maintenance. Each time, new guidelines on overhaul and shipboard maintenance were issued. To complicate matters, the SH-60 program had started gradually phasing in a larger diameter (2.80 in. vice the original 2.625 in.) RAST main probe in the late 80's and early '90s. The larger probe was discovered in 1991 by our ASIRs, while investigating unlatching events. Subsequent meetings with Sikorsky resulted in an intermediate size probe (2.730 in. DIA) which is currently on all fleet H-60B's and R's.

The larger probe diameter had caused additional prying loads on the arresting beams and latches. The 2.80 in. diameter probe was shown analytically to cause latching failure, and was suspected of causing several units to require early change-out due to extraordinary amounts of wear and degradation on arresting beams and components.

The goal of the new latch design is to prevent undesired unlatching. Extensive lab testing has shown that in exactly the same wear/lack of maintenance conditions that cause the old latch to open, the new latch does not open. As of June 2006, about 50% of RSDs have the new latch installed (LRC 66). The new latches are being installed by the depots during periodic overhaul, which occurs on a 48-month RSD change out cycle.

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BEAMS UNLATCHING & LRB 25

Recently, there have been two reports of inadvertent RSD unlatching in the Fleet. Unlatching is defined as the condition when the beams fully separate from one another. One of them resulted in a helicopter rollover. Thankfully, nobody was injured and aircraft damage was repairable. An Engineering Investigation (EI) of the mishap event identified potential causes, but found no evidence of a root cause.

A separate EI is ongoing, in order to determine the cause of a second unlatching event (without mishap), reported JAN 2006.

All past incidences of unlatching (prior to the most recent ones) have been attributed to maintenance and wear issues. The new latch and pivot design has been incorporated to eliminate inadvertent unlatching (due to maintenance / equipment wear issues). *Roughly half of fleet RSDs have incorporated the new latches, which are being installed during the 48-month RSD overhaul cycle.*

"THE ASSIST" is an unclassified, periodic publication issued by the RAST team of the Recovery Branch, SE/ALRE In-Service Engineering Division, Naval Air Warfare Center, Aircraft Division, Lakehurst, New Jersey.

The information herein is unofficial and is provided to assist the RAST community in the operation and maintenance of the RAST system.

To assist in determining whether or not unwanted unlatching is widespread throughout the fleet, we issued Launch and Recovery Bulletin (LRB) No. 25 (242118ZJAN06 & 041433ZAPR06). LRB 25 asks the following questions:

(1)PROVIDE DESCRIPTION OF ANY UNCOMMANDED RSD UNLATCHING EVENT(S). AN UNLATCHING EVENT IS DEFINED AS THE RSD ARRESTING BEAMS SEPARATING FROM ONE ANOTHER.
(2)FOR EACH EVENT (APPROXIMATE DATA IS ACCEPTABLE): DATE, HULL NUMBER, LOCATION (FORE/AFT/PORT/STBD) OF PROBE WITHIN RSD, STRAIGHTENING OR TRAVERSING, SPECIFIC STEP IN MANEUVERING PROCESS AT TIME OF UNLATCHING (E.G., TG TO PORT, RSD BRAKE SWITCH AUTO SELECTED, ETC.), PRESENCE OF INTERMITTENT FLICKERING LATCH LIGHT INDICATION AT THE LSO CONSOLE, SEA CONDITION (DEGREES ROLL), SHIP HEADING, SHIP SPEED, WIND SPEED AND DIRECTION, HELICOPTER DESIGNATION (SH-60B OR R), AND ANY CORRECTIVE ACTION(S) TAKEN AFTER THE UNLATCH EVENT OCCURRED.

This is where you can help us. Whether or not you've had an unlatching event, we'd like to hear from you. If you haven't already replied to the LRB, please do so. You can send your response via e-mail or message, whatever is easiest. About 50% of the fleet has responded to the LRB. Out of that 50% (excluding the two incidents under investigation): 2 ships reported latch light flicker (without beam separation), with the remainder having no unlatching events. Latch light flicker is not uncommon, and is caused by slight movement or vibration of the latch linkage or latch. The amount of flicker is dependent upon how the latch switch is installed and whether or not preventive maintenance has been performed to free up the switch linkages. We are developing a more detailed procedure for switch installation to reduce the incidence of flicker.

Any info. you can provide about unlatching on your ship will help us. The goal here is not to place blame, but rather to find and fix any potential problems. Thanks for your help.

PRELUBE 19 AND NEW TRAVERSE CABLE

"Two birds with one stone".

Lubricating the RSD traverse cable is a dirty job but not anymore. A new cable is out. It replaces the original steel cable, increases corrosion resistance and best of all, no more Prelube 19! The new cable is galvanized, increasing its ability to resist corrosion. It also has a revolutionary lubricant (Clearlube 55) applied to it during the manufacturing process, eliminating the need for further greasing.

I know, I know, "What is Clearlube 55?", you ask. Its a wire rope semi-solid lubricant compound that behaves like a liquid under stress. The lubricant is a "thixotropic" material (WHAT?...sounds more like a disease.) This term means the material acts like a solid or semi-solid when undisturbed yet will liquefy when stirred or shaken. In this case, stretched or bent. You can forget about the nasty task of greasing those cables, destroying gloves and wrecking uniforms.

As always, we appreciate any feedback you can provide. Attached below is a copy of the message that clarifies inspection and the do's and don'ts associated with the new cable. Please read carefully.

SUBJECT: 211337Z SEP 05 R HELICOPTER LANDING SYSTEM (HLS) RAST TRAVERSE CABLE LUBRICATION

REF/A/DOC/MRC 5882 012, 53-9KCE N, R-13M/-//
REF/B/DOC/MRC 5882 012, 49-9KDS Y, LU-1/-//

1. RECOVERY ASSIST, SECURING AND TRAVERSING (RAST) SYSTEM TRAVERSE CABLE ASSEMBLIES, HAVE RECENTLY BEEN PROCURED AND DELIVERED UNDER NAWCADLKE DWG 6532C282, REV R, AND ARE PRESENTLY AVAILABLE IN THE SUPPLY SYSTEM FOR FLEET USE. THE FORM, FIT AND FUNCTION OF THE TRAVERSE CABLES HAVE NOT CHANGED BUT THE METHOD OF CONSTRUCTION HAS BEEN MODIFIED TO INCLUDE A NEW WIRE COATING AND A NEW PRESERVATIVE APPLIED DURING THE MFG PROCESS.

2. CABLE ASSEMBLIES PROCURED TO 6532C282 REV P AND CABLE ASSEMBLIES PROCURED TO 6532C282 REV R, RETAIN THE SAME PN AND NSN AND APPEAR IDENTICAL; HOWEVER, DUE TO THE MODIFICATION IN CONSTRUCTION, CABLES PROCURED TO REV R WILL NOT REQUIRE PERIODIC LUBRICATION OR LAY-UP LUBRICATION AS DIRECTED BY REFS A AND B.

3. APPLICATION OF PRELUBE 19, PRESENTLY USED TO LUBRICATE RAST TRAVERSE CABLES AND TRAVERSE DRUMS (AS DIRECTED BY REFS A AND B) IS INCOMPATIBLE WITH THE PRESERVATIVE APPLIED TO CABLES PROCURED TO REV. R.

4. EFFECTIVE IMMEDIATELY, USE OF PRELUBE 19,PRESENTLY USED TO LUBRICATE RAST TRAVERSE CABLES AND TRAVERSE DRUMS (AS DIRECTED BY REFS A AND B), WILL BE DISCONTINUED ON ALL TRAVERSE CABLES AND TRAVERSE DRUMS. NO ALTERNATIVE LUBRICANT WILL BE REQUIRED OR SPECIFIED.

5. EFFECTIVE IMMEDIATELY, FOR PURPOSE OF RAST TRAVERSE CABLE AND TRAVERSE DRUM LUBRICATION, PRELUBE 19 SHALL NO LONGER BE REQUISITIONED.

6. PERIODIC INSPECTION OF THE CABLES AND LUBRICATION OF THE SHOCK ABSORBERS AND LEVER ASSEMBLIES WILL CONTINUE IN ACCORDANCE WITH REF A; WITHOUT PRESENTLY REQUIRED CABLE CLEANING OR APPLICATION OF ANY CABLE LUBRICANT.

Typical Trough with caked-on corrosion on the Traverse Cable

USING PROBE CHOCK TO STOP SLIPPAGE IN THE ARRESTING BEAMS

In the past couple of years, the incidence of the helo probe slipping fore and aft within the RSD arresting beam pins has increased. While the probe is shifting from port beam to starboard beam, such as during straightening or normal aircraft rolling, it may slip a position before it finds the pin on the starboard side (and vice versa). The slipping is exaggerated on DDG 51 Flt IIA ships due to the negative angle (shear) of their flight decks. This slope toward the forward bulkhead in the hangar results in a constant forward lean of the helicopter probe against the arresting beam pins. The pins tend to separate when the probe contacts the seam between the tips of the pins.

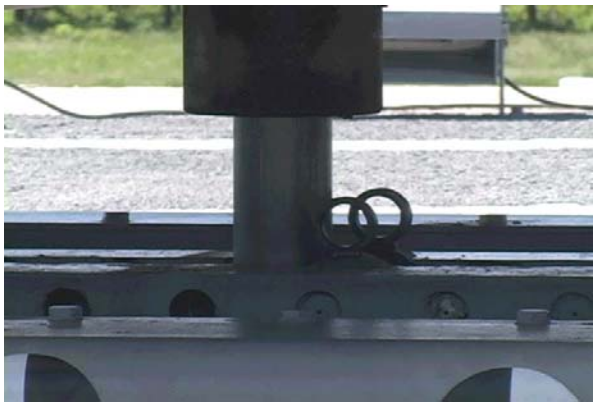
During probe slippage, the aircraft remains between latched beams, and is considered safe. However, some undesirable side effects are damage of the forward or aft cover plates, and also potential cumulative damage to the A/C probe.

We needed a solution that would eliminate the slipping, was low cost, and could be fielded quickly. That solution was the Probe Chock. Prior to helo handling operations, the Probe Chock is installed on the set of pins forward or aft of the probe. Shown at the right, the probe chock stops the aircraft probe from slipping through the pins. The probe chock has been installed IAW LRC 67, and is being distributed to all DDG 51 FLT IIA ships.

If you're not on a DDG 51 FLT IIA ship, but you need the Probe Chock, then you can order it through the supply system using the info below. We are working to update the Support/Test Equipment AEL 2-830024051 so that all RAST capable ships are authorized an allowance for these parts. (The hardware won't be pushed to each ship, but each ship will be authorized to requisition and keep onboard.) Hopefully this update will happen within the next month.

Part #	Name	NSN
525129-1	Probe Chock	1710-01-525-6683
627858-1	Mounting Rod	1710-01-525-6693

If you are not on a DDG 51 FLT IIA ship, please submit your requisitions ASAP so the supply system shows the proper demand. As of this writing, there are only 2 backorders on file for the probe chock.



Sampling Valves and WHPU Hydraulic Fluid Samples

MRC S-1 calls for fluid samples to be taken, to determine fluid contamination levels. Running the RAST system with contaminated fluid in the hydraulic system may result in massive component damage.

We can't overstress how important fluid sampling is. The cost to flush and repair a system that was left running with contaminated fluid can reach $400,000.

Due to a recent feedback report from one of your peers, we found that MRC S-1 PARA 2.A. is confusing, because it specifies taking samples from "lines A and G", but sometimes there aren't any sampling valves in those lines. Placement of sampling valves is at the discretion of the shipbuilder.

So, we changed MRC S-1, as follows (You should get the revised card with your next update):

2. TAKE HYDRAULIC FLUID SAMPLES

A. TAKE WHPU FLUID SAMPLES.
(1) PLACE PAIL UNDER WHPU RESERVOIR DRAIN VALVE.
(2) DRAIN OFF APPROXIMATELY ONE GALLON OF FLUID.
(3) WIPE WHPU DRAIN VALVE OPENING CLEAN.
(4) CONNECT FILTER BUGGY SUCTION (INLET) HOSE TO WHPU RESERVOIR DRAIN VALVE.
(5) REMOVE STRAINER FROM WHPU RESERVOIR FILL PORT AND CONNECT SERVICING UNIT OUTLET HOSE.
(6) SET REMOTE/LOCAL SWITCH TO LOCAL.
(7) ENERGIZE 440 VAC, 60 HZ, SINGLE-PHASE AND 440 VAC, 60 HZ, 3 PH ELECTRICAL POWER SUPPLY TO RAST SYSTEM.
(8) VERIFY THAT POWER ON INDICATOR ON WINCH-HYDRAULIC POWER UNIT MOTOR STARTER (WHPUMS) PANEL IS LIT.
(9) AT TCP, VERIFY THAT 115 VAC ON INDICATOR IS NOT LIT, RESPONSE TEST NORMAL (GREEN) LIGHT IS ON, AND BASE PRESSURE INDICATOR IS LIT.
(10) SET MASTER SW ON TCP TO ON AND VERIFY THAT 115 VAC ON INDICATOR IS LIT.

CAUTION: WHEN WHPU MOTOR IS STARTED, THE BASE PRESSURE INDICATOR MUST GO OUT WITHIN TEN SECONDS. IF THIS DOES NOT OCCUR, PRESS THE PWR. PACK-ELEC MOTOR STOP PUSHBUTTON AND DIAGNOSE THE FAULT. IF THE HYDRAULIC SYSTEM IS OPERATED WITHOUT ADEQUATE PRESSURE, SERIOUS DAMAGE CAN RESULT.

(11) PRESS POWER PACK-ELEC MOTOR START PUSHBUTTON TO START WHPU MOTOR.
(12) VERIFY THAT BASE PRESSURE INDICATOR GOES OUT WITHIN 10 SECONDS.
(13) WHEN FLUID REACHES OPERATING TEMPERATURE (126 TO 150 DEGREES) OPEN WHPU RESERVOIR DRAIN VALVE AND START FILTER BUGGY.
(14) POLISH SYSTEM FLUID FOR 60 MINUTES.
(15) DE-ENERGIZE FILTER BUGGY AND CLOSE WHPU RESERVOIR DRAIN VALVE.
(16) DISCONNECT FILTER BUGGY.

NOTE: FLUID SAMPLES MUST BE TAKEN WHILE SYSTEM IS RUNNING. CLEARLY MARK EACH SAMPLE BOTTLE TO INDICATE THE LOCATION WHERE SAMPLE WAS TAKEN.

(17) OPEN RESERVOIR DRAIN VALVE AND DRAW OFF 8 OUNCES OF FLUID INTO A CLEAN, DRY SAMPLE BOTTLE, AND MARK AS "WHPU RESERVOIR". CLOSE RESERVOIR DRAIN VALVE.

NOTE: LINE A IS THE HYDRAULIC LINE BETWEEN THE OUTLET OF THE WHPU TAIL GUIDE WINCH (TGW) PUMP AND THE INLET OF THE TAIL GUIDE WINCH HYDRAULIC CONTROL ASSEMBLY. LINE G IS THE HYDRAULIC LINE BETWEEN THE OUTLET OF THE WHPU TRAVERSE WINCH PUMP AND THE INLET OF THE TRAVERSE WINCH VALVE ASSEMBLY. MOST SHIPS HAVE SAMPLING VALVES IN LINES A AND G. BUT, DEPENDING ON THE SHIPBUILDER, SOME SHIPS MAY NOT HAVE A SAMPLING VALVE IN LINE A AND/OR LINE G.

(18) PLACE PAIL UNDER A SAMPLING VALVE IN LINE A. FLUSH SAMPLING VALVE BY RELEASING A FEW OUNCES OF FLUID INTO THE PAIL FROM LINE A. THEN, TAKE AN 8 OUNCE FLUID SAMPLE IN A CLEAN, DRY SAMPLE BOTTLE AND LABEL AS "LINE A". REMOVE PAIL AND DISCARD DRAINED FLUID.

Sampling Valves and WHPU Hydraulic Fluid Samples—continued

(19) PLACE PAIL UNDER A SAMPLING VALVE IN LINE G. FLUSH SAMPLING VALVE BY RELEASING A FEW OUNCES OF FLUID INTO THE PAIL FROM LINE G. THEN, TAKE AN 8 OUNCE FLUID SAMPLE IN A CLEAN, DRY SAMPLE BOTTLE AND LABEL AS "LINE G". REMOVE PAIL AND DISCARD DRAINED FLUID.

TYPICAL HYDRAULIC SAMPLING VALVE
(YOUR SAMPLING VALVES WILL LOOK SIMILAR TO THIS)

(20) IF THERE ARE NO SAMPLING VALVES IN LINE A AND/OR G:

(A) TAKE A SAMPLE FROM A RETURN LINE SAMPLING VALVE THAT'S AS CLOSE TO THE RESERVOIR AS POSSIBLE AND LABEL BOTTLE AS "RETURN LINE".

(B) TAKE A SAMPLE FROM A LOCATION WHICH IS REPRESENTATIVE OF FLUID BEING SUPPLIED TO SYSTEM COMPONENTS. LABEL BOTTLE AS "SUPPLY LINE".

(21) REPLENISH RESERVOIR FLUID LEVEL

(22) DE-ENERGIZE SHIP'S 440 VAC, 60 HZ, SINGLE-PHASE AND 440 VAC, 60 HZ, 3 PH ELECTRICAL POWER SUPPLY TO RAST SYSTEM.

When drawing samples, pay particular attention to the following:

a. Change the filters and clean the strainer on the filter buggy. If you leave a dirty filter in the unit, it is a sure way to fail the analysis.

b. Don't sell yourself short and try to shortcut letting the fluid reach proper operating temp before starting the filter buggy.

c. When it comes to RAST hydraulic fluid, more is better. The more often you run the filter buggy, the cleaner the system is (see MRC M-5). This is not like your car where you're changing your oil every 3000 miles. Some of these systems run for very long, extended periods of time without any break and it may be years before the system is completely flushed.

d. Ensure you draw off 8 oz of fluid in clean bottles that have been rinsed in the same fluid to be tested. In other words, for a WHPU sample, you would fill bottle about half way with WHPU fluid, replace cap and shake. Drain bottle and if you have any doubts do it again. Once you are satisfied with your rinse of the bottle, draw at least 8 oz of WHPU oil IAW MRC. The testing lab will require at least 100 ml's for complete analysis. If you provide them with 8 oz's, it will equate to 236 ml's, more than enough.

e. Okay, you've accomplished the easy part. Now comes the hard part. You must submit all samples to designated oil laboratory for analysis IAW NAVY OIL ANALYSIS PROGRAM, otherwise known as NOAP. You must, positively ensure, make certain and beyond a shadow of a doubt, that samples are properly marked:

Sampling Valves and WHPU Hydraulic Fluid Samples—continued

- Each sample has fluid origin, in other words who, what, where and when sample was taken. Example WHPU, USS Never Sail, DDG-1, 02/11/1955.

- Always request a (5-15) particle count to be included on lab analysis reports, and define each particle count and class level ie: (5-15) (15-25) (25-50) (50-100) (Over-100) IAW table 556-8-2 of the NSTM-556, using the NAS 1638, which is the standard used for the analysis. Don't just except a pass or fail !!!

- Always request an allowable water contamination limit to be included on Lab Analysis Reports.

Okay, let's say sample results come back and the fluid has exceeded acceptable contamination limits (see MRC S-1 Para. 3). So what do you do now? You could just call it a day, forget about it, and hit the beach. But, if you ignore it, sooner or later you'll pay, either a lot of money to thoroughly flush the system and replace components, or ASIR will not certify the system.

So, here's what you do. First, re-sample to verify the original analysis. If the fluid contamination level is still not acceptable, the system shall be cleaned accordingly. For the WHPU, change the filter elements, using your R-6 5882/012 MRC card for guidance. Then, using the filter buggy, filter it (reservoir fluid) and run the system, filter it and run the system, and when you think you've got it clean, filter and run the system again. Submit samples, and if they return failed, drain off fluid from reservoir and fill with fresh filtered fluid. Hopefully this will resolve your fluid issue. If not, then it's on to the big flush, which could cost considerably both in manning, several weeks and funding.

Also, note that if the hydraulic fluid appears milky, there may be too much water in the fluid. Check the WHPU reservoir vent dryer, P/N GD-00165-162W4 (pictured below).

If the canister particles are pink in color, then the canister needs to be replaced. Order replacement canister using the info. below:

Name	P/N
Canister Ass'y.	GC-00165F-162W2

NSN: 4440-01-261-3010

In closing, we hope this will be useful in the handling of RAST hydraulic fluid samples. The whole issue can become confusing, however we believe the solution to the whole darn thing is to educate the fleet RAST techs concerning this issue and run the filter buggy cart! Can't say it enough, remember one ounce of prevention may be worth a pound of cure.

We'd like to acknowledge the contributions from ASIR to this article. ASIRs are our Field Reps., and their expert hands-on knowledge of the equipment is a benefit to all. In fact, your neighborhood ASIR rep. should be your best friend when you're trying to resolve a RAST-related issue. They can assist you in keeping your equipment in good operating condition, so that certification will not be a problem.

RSD Cable Tensiometers

Periodic calibration of the RSD Cable Tensiometer (on RAST AEL C830024050) is mandatory. During calibration of the tensiometers currently on the AEL, from OPTI Manufacturing (see below), a poor reliability trend was noticed.

Current Tensiometer from OPTI Manufacturing—NSN 6635-00-530-1128

For example, recently, one ship had ordered 6 tensiometers, and had them all tested at the MidAtlantic Regional Calibration Center (MARCC). All six failed calibration, including 2 that were new, just out of the box. MARCC has reported an 82% failure rate for these tensiometers. Additionally, SUPSHIP BATH and ASIR EAST have reported an increasing failure trend of OPTI manufacturing's tensiometers.

Considering the cost for each tensiometer (@$600), the time wasted, and the potential delay in system operation due to poor tensiometer reliability, we are changing to a different tensiometer.

RAST AEL C830024050 will be changed to reflect the new tensiometer, as follows:

P/N 19738 NSN 6635-01-455-6940

Please take note of this change and order this tensiometer the next time you need one.

SIGMATION TENSIOMETER P/N 19738 NSN 6635-01-455-6940

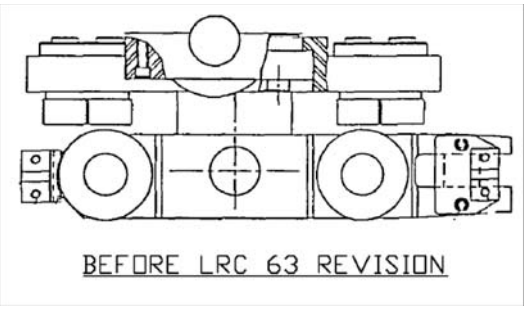
Note that if you have ordered OPTI Manufacturing Tensiometers from the Supply system, and they fail calibration right out of the box, you can get your money back for it. What you need to do is submit a Product Quality Deficiency Report (PQDR) through your Supply Officer. Then, you send the defective tensiometers back to Supply with the PQDR paperwork. Supply will then give you credit for the parts, and work out a solution with the OEM. Submitting PQDR's is important, not only for this issue, but anytime you get new equipment that's defective. First, you'll get credit for the parts. Next, if a manufacturer gets too many PQDRs, the Supply Activity will investigate and act to fix the problem. If you don't submit PQDRs, nobody will know there's a problem, and you'll be out some money.

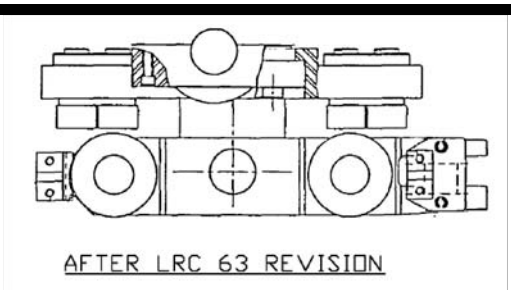
RSD FWD Electric Cable Clamp Rotation

The RSD electric cable clamp, P/N 428014-1, on the FWD Towbar, was added as part of Launch and Recovery Change No. 63. After the LRC had been installed in the fleet for several years, our ASIR reps informed us of a potential issue with the way the electric cable bends when the FWD Towbar is resting against the FWD shock absorber . As you can see from the pictures below, the electric cable bends at a sharp angle.

We've determined that the cable remains fully functional while bending like this, however over time we may start to see fatigue problems.

In order to avoid potential fatigue failure, we have revised the installation procedure for the FWD clamp. We are preparing a Launch and Recovery Bulletin (LRB) which will direct the clamp to be rotated 180 degrees, as shown:





If you'd like to get a jump on the LRB, you can follow the procedure below:

REF/C/DOC/AD-700A1-OMI-000, CHNG 9/01OCT2003//
A. INSTALL MAINTENANCE TRACK PLATES IN FWD END OF RAST TRACK (HANGAR) IAW REF C PARA 6-175A STEPS B.1 AND B.2.
B. TRAVERSE RSD ONTO MAINTENANCE TRACK PLATES IAW REF C PARA 6-175A STEPS B.3 THRU B.7.
C. CEASE TRAVERSING IAW REF C PARA 6-175A STEPS B.8 AND B.9 WHEN THE FWD END OF THE FWD RESTRAINT AND TOWBAR ASSEMBLY IS JUST VISIBLE PAST THE AFT END (OR NOT BEYOND MIDPOINT) OF THE MAINTENANCE TRACK PLATE.
D. SWITCH OFF POWER IAW REF C PARA 6-175A STEPS B.10 AND B.11.
1) REFER TO REF C FIG 6-160. REMOVE ELEC-TRIC CABLE CLAMP ASSEMBLY (52) FROM THE FORWARD END OF THE FORWARD RESTRAINT TOW-BAR (49) BY REMOVING TWO SCREWS (47).
2) REMOVE CABLE FROM CLAMP BY REMOVING TWO SCREWS (48) AND SPLIT FAIRLEAD HALVES (51).
3) RE-ORIENT CLAMP (52) 180 DEGREES, SO THAT THE SPLIT FAIRLEAD (51) IS LOCATED AFT OF THE SCREWS (47).
4) POSITION ELECTRIC CABLE IN THE GROOVE BETWEEN THE SPLIT FAIRLEAD HALVES (51) AND INSTALL SPLIT FAIRLEAD (51) ON TOP OF CABLE BY APPLYING LOCKING COMPOUND, MIL-S-46163, TYPE II, GRADE M, TO THREADS OF TWO SCREWS (48) AND TORQUE TO 66 TO 78 INCH POUNDS.
5) INSTALL CLAMP ASSEMBLY (52) ONTO FWD RESTRAINT AND TOWBAR ASSEMBLY (49) SO THAT THE SPLIT FAIRLEAD (51) IS AFT OF THE CLAMP ATTACHMENT SCREWS (47). APPLY LOCKING COMPOUND, MIL-S-46163, TYPE II, GRADE M, TO THREADS OF TWO SCREWS (47) AND TORQUE TO 33 TO 40 INCH POUNDS.
6) TRAVERSE RSD OFF MAINTENANCE PLATES IAW REF C PARA 6-175A, STEPS C.17 THRU C.19.
7) REMOVE MAINTENANCE PLATES AND INSTALL STANDARD TRACK PLATES IAW REF C, PARA 6-175A, STEPS C.21 THRU C.25.
8) COMPLETE SYSTEM CHECKOUT IAW REF C PARA 6-175A, STEPS D.2 THRU D.6.

INDEX OF PAST ASSIST ISSUES

Following is an index of all the past ASSIST issues. Most of the topics covered in the past are still applicable today. You can look at all of the issues at the following web address:

www.lakehurst.navy.mil/nlweb/rast

ISSUE #1 (JUL '94)
1. WORD FROM THE FLEET LIAISON
2. LRC NO. 57 INTRODUCES "-14" RSDS
3. RAST RA CAL KIT SURVEY RESULTS
4. PROPER SERVICING OF THE RSD ACCUMULATOR

ISSUE #2 (JAN '95)
1. MAINTENANCE TIP: CYCLE YOUR EQUIPMENT
2. RSD ELECTRIC CABLES
3. ECA FUSES
4. PROPER SERVICING OF THE ROPE ACCUMULATOR
5. DOCUMENTING SYSTEM MAINTENANCE

ISSUE #3 (APR '95)
1. HYDRAULIC SYSTEM CONTAMINATION
2. A LOOK AT THE ONGOING EFFORTS TO IMPROVE THE SYSTEM
3. HOW TO AVOID ELECTRIC CABLE & GUTTER PROBLEMS
4. RSD ELECTRIC CABLE FAILURES

ISSUE #4 (JUL '95)
1. RSD PRESSURE GAGE FAILURES
2. TRACK PLATE LIFTING TOOL AND TGW PUMP BEARING FAILURE
3. KEEPING RAST SYSTEMS UP AND RUNNING
4. CASREPS AND CASCORS

ISSUE #5 (NOV '95)
1. STRIPPED MAROTTA VALVE THREADS
2. EVERYTHING YOU EVER WANTED TO KNOW ABOUT TRAVERSE CABLE LUBE
3. MAINTENANCE REVIEW CONFERENCE FOR RAST SYSTEM
4. LISTING OF LATEST HLS TECH MANUALS

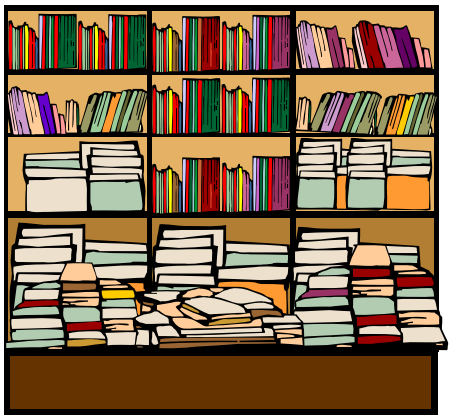
ISSUE #6 (MAR '96)
1. HOW BIG IS YOUR CONNECTOR? - CHANGING RA CABLES
2. RAST AVCERT PREPARATIONS
3. RSD TURN-IN PROCEDURE
4. HRS ISD AND LAMP BAR TURN-IN PROCEDURES
5. PROTECTING RAST DURING SRAS AND SMOKING PRELUBE 19 RAGS

ISSUE #7 (JUN '96)
1. HYDRAULIC FLUID FILTRATION CART INFO
2. MACHINERY ROOM IMPROVEMENTS UPGRADE STATUS
3. DEMAND ONLY REQUISITION PROCEDURE
4. PROPER SERVICING OF RSD ACCUMULATOR (ISSUE NO. 1 REPEAT)

ISSUE #8 (OCT '96)
1. TOP FIVE REASONS WHY YOU WILL CASREP YOUR RSD
2. IT'S THE LITTLE THINGS THAT COUNT (IMPORTANCE OF PROPER MAINTENANCE)
3. AVOIDING HYDRAULIC CONTAMINATION

ISSUE #9 (MAR '97)
1. RSD ACCUMULATOR CHARGING VALVE, TRACK PLATE LIFTING TOOL
2. RSD OVERHAUL - ACCESSORY PARTS SIMA NEEDS
3. RSD WIRING GUIDANCE
4. TRAVERSE CABLE CHANGEOUT AND RELATED MAINTENANCE
5. HOW TO AVOID ELECTRIC CABLE & GUTTER PROBLEMS (ISSUE NO. 3 REPEAT)

ISSUE #10 (JUN '97)
1. $400,000 SPENT TO CLEAN-UP LOW BID HYDRAULIC SYSTEM DISASTER
2. TGW MOTOR GOES BOTH WAYS (CONVERT A TGW MOTOR TO AN RA MOTOR)
3. BE KIND TO YOUR LOCAL ASIR
4. UPCOMING & ONGOING EFFORTS TO IMPROVE YOUR RAST LIFE



INDEX OF PAST ASSIST ISSUES—Continued

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1. STATUS OF RAST UPGRADES (LRCS 62, 63, AND 64)
2. ERRATIC RA SYSTEM PERFORMANCE CAUSED BY SEIZED MSA PIVOT ARMS
3. SHIPBOARD RAST TRAINING
4. RSD OVERHAUL - ACCESSORY PARTS SIMA NEEDS (REPRINTED)
5. HIGHLIGHTS OF JAN 98 SEMI-ANNUAL HLS SUPPLY SUPPORT MEETING

ISSUE #12 (JUNE '98)
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2. RSD CONTROL VALVE ADJUSTMENT
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ISSUE #13 (NOV '98)
1. WORDS FROM ASIR EAST
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3. NEW REUSABLE SHIPPING CONTAINER FOR THE RSD
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1. SEAL THAT TROUGH!
2. RSD MAINTENANCE
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ISSUE #15 (NOV '99)
1. WHAT'S THE STORY WITH LRC NOS. 63 & 64
2. A WORD FROM ASIR NORFOLK & THE RAST FLEET LIAISON
3. HAVING TROUBLE WITH RSD SYSTEM PRESSURE?
4. MRC REVISION

ISSUE #16 (OCT '02)
1. SH-60 PROBE SLIPPAGE IN THE RSD
2. WHERE'S THE CASE?!?
3. WHAT'S MY AGE AGAIN? & SAVING TIME
4. BE KIND TO YOUR LOCAL ASIR
5. IN MEMORIAM (9/11/01)

ISSUE #17 (JUL '03)
1. RSD LATCH & PIVOT DESIGN CHANGE
2. FAULT DETECT FOR PROBE SLIPPAGE
3. PICTURES OF THE QUARTER
4. MRC CORRECTION
5. PUBLICATIONS UPDATE & DISTRIBUTION

IN MEMORIAM

Unfortunately, in the time since our last issue was published, we lost two members of our team.

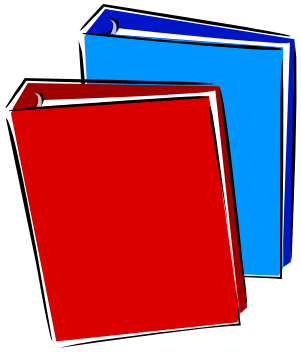
The passing of friends.

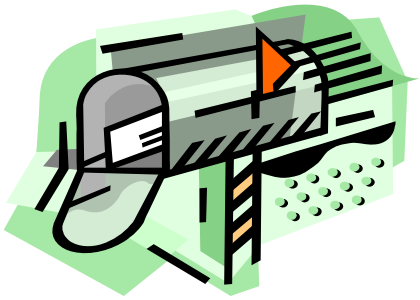
Thomas "Bear" Cowden passed away July 2005. Bear was enjoying his family at Chick's Beach in Virginia Beach, Va. when his heart gave out. Bear was a kind man that looked after his family and friends. If you needed something and he had it, then you had it. If he didn't have it, then he tried to find it for you. He started his federal career at the Philadelphia Naval Shipyard in shop 38 where he worked on catapults and arresting gear. He made friends with some of the Voyage Repair Team (VRT) on TDY to Philadelphia and it wasn't long until he was a VRT member working in Norfolk. Bear started there as an ALAD mechanic and was promoted to supervisor and then planner of the VRT prior to being selected to join The NAVAIR ASIR community, where he quickly became one of the "go to guys". He is sorely missed as a NAVAIR team member and a close and dear friend.

David Leung began his career at NAVAIR Lakehurst in 1984. Dave passed away unexpectedly in May 2005. Words can't adequately describe how much we miss Dave, both as a friend and a co-worker. Dave was a highly respected engineer, and a solid member of our RAST In-Service engineering team. If you look around your RAST system, you can see the contributions Dave made to the system. Some of Dave's designs are: RSD cover plates 4 (breakaway plate) and 5, RSD Reservoir air filter, improved RSD line filter, hinged Traverse brake band, Probe chock (prevents probe slippage within RSD beams), and new RSD latches, pivot pins, and arresting beam pins (on the –18 RSDs). Both in and outside of work, Dave was one of the kindest, most even-keeled person most of us have ever met, being calm in nearly every situation, and always willing to help. Dave was a volunteer Emergency Medical Technician, and loved spending time with his family and coaching his daughter's soccer team. Dave is greatly missed.

MRC INFORMATION

RAST MIP 5882/012 and associated MRCs are undergoing changes to make the cards consistent with NAVSEA standardization of wording and format. Some statements and procedures are often worded in a vague, ambiguous, or illogical manner; and such wording results in the scheduling of those MRCs being subject to misinterpretation or not being accomplished at all. This is an ISEA priority and on-going effort. Work Center Supervisors and LPOs are highly encouraged to submit TFBRs when recognizing any discrepancies or deficiencies with your MRCs. The interest and participation shown by Ship's Force Personnel is highly appreciated.





PUBLICATIONS DISTRIBUTION

Technical Manuals are distributed to users by NATEC based on the Automatic Distribution Requirement List (ADRL) for each manual. All HLS accounts were just checked and many ships weren't on the correct ADRLs – meaning you might not have the most current manuals! NATEC is correcting the ADRLs for all future updates, but they won't send you past updates you might have missed – so you really should check what you're using right now. (See list below for all the HLS manuals you should have.) Your ship's Central Technical Publication Librarian (CTPL) should be able to order new pubs if the ones you have are out of date. Note that NAVAIR Lakehurst released a message, DTG 122004Z MAY 06, explaining in more detail about NAVAIR tech manuals and how to access the right ones.

AD-700A1-IPB-000 CHANGE 10 DATED 1 AUGUST 2005 (AVAILABLE JUNE 06)- RAST ILLUSTRATED PARTS BREAKDOWN

AD-700A1-OMI-000 CHANGE 9 DATED 1 OCTOBER 2003 – RAST OPERATION AND MAINTENANCE MANUAL

AD-400A1-IPB-000 CHANGE 2 DATED 1 APRIL 1996 – HRS ILLUSTRATED PARTS BREAKDOWN

AD-400A1-OMI-000 CHANGE 5 DATED 1 JANUARY 1997 – HRS OPERATION AND MAINTENANCE MANUAL

AD-400B1-OMI-000 CHANGE 1 DATED 1 JUNE 2000 – FDSSS OPERATION AND MAINTENANCE MANUAL

Parts List for Filters & Fluid

WHPU M8815/6-10
NSN 1650-01-033-1612
O-RING MS28775-020
NSN 5330-00-585-7723
APL U992000349

WHPU M8815/6-12
NSN 1650-01-262-1238
O-RING MS28775-024
NSN 5330-01-107-9249
APL U992000052

WHPU M8815/6-16
NSN 1650-00-149-8331
O-RING MS28775-028
NSN 5331-00-580-5056
APL U992000113

WHPU DRYER
GD00165-162W4 OR 6524E721-1
NSN 4440-01-245-8060
APL U992000143

WHPU DRYER GASKET
AA-9500-D1603
NSN 5330-01-258-6520

ROPE ACCUMULATOR
M8815/6-8
NSN 1650-01-114-1899
APL U992000242

HAND PUMP (RSD)
6532C424-1 or 24312-A-10-C-H
NSN 4330-01-182-0433
APL U992000386

RSD LINE FILTER = 6532C292-4
FOR 6532E900-15, -17 & -18
FILTER P/N 861588
NSN 9C4330-21-914-6128
ELEMENT P/N 861485
NSN 9C-4330-21-914-6127

WHPU HYDRAULIC FLUID
5 GALLON CANS
NSN 9150-00-985-7232
2075 T-H SYMBOL
60 GALLONS REQUIRED
APL 2-830024053
MIL-PRF-17672
RSD HYDRAULIC FLUID
1.8 GALLONS REQUIRED
1 GALLON CANS
NSN 9150-00-149-7432
MIL-PRF-83282A
AEL 2-830024053

RSD AIR FILTER = 524640-1
FOR 6532E900-15, -17 & -18
FILTER P/N LBGCPM
NSN 9C 4310-00-847-2523

COMMANDER
NAVAL AIR WARFARE CENTER
AIRCRAFT DIVISION
CODE 4.8.10.2
HWY 547, BLDG. 596-1
LAKEHURST, NJ 08733-5090

Ships: Pass to RAST Technician